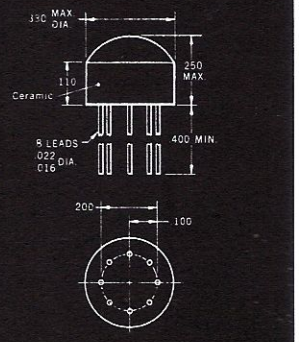
μL 923 JK FLIP-FLOP

INDUSTRIAL RTL MICROLOGIC® INTEGRATED CIRCUITS

TEMPERATURE RANGE +15°C TO +55°C

GENERAL DESCRIPTION - The μL923 Industrial Flip-Flop is a fully integrated, monolithic circuit, manufactured using the Fairchild Planar Epitaxial process. This element is designed for use in industrial shift register and binary counting applications. The μL923 JK Flip-Flop is compatible with the basic Industrial Micrologic Family and is guaranteed to operate at a frequency of 2.0 Mc minimum over the 15°C to 55°C temperature range.

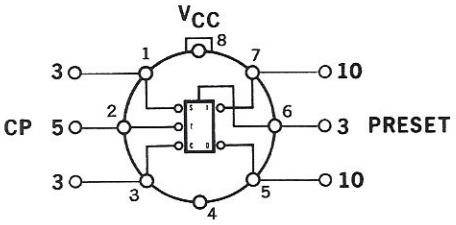
PHYSICAL DIMENSIONS
(SIMILAR TO TO-5)



NOTES: All dimensions in inches
Leads are solid plated nickel

Operating Voltage Range	
Collector Supply Voltage (V_{CC})	3.6 V ±10%
Operating Temperature Range	+15°C to +55°C
Storage Temperature Range	-55°C to +125°C

LOGIC SYMBOL AND LOAD FACTORS



TOP VIEW

TRUTH TABLE

SET (1)	CLEAR (3)	OUTPUT (7)
	t = n	t = n+1
H	H	X^n
H	L	H
L	H	L
L	L	$\overline{X^n}$

H is more positive than L
X is the output state at time n

PURCHASING INFORMATION

To order part, the following part number should be used to expedite handling.

PART NO. U8A992328X

LOADING RULES AND DRIVE FACTORS

The mixing of low-power and medium-power Micrologic results in the full utilization of all available drive capability from the circuit. When driving low-power Micrologic it will be noted that each low-power input (base) represents a load factor of 1, while each medium-power Micrologic input represents a load factor of 3. The output drive factor can be used to drive any combination of inputs, provided the sum of the input loads does not exceed the output drive factor.

FAIRCHILD SEMICONDUCTOR
A DIVISION OF FAIRCHILD CAMERA AND INSTRUMENT CORPORATION

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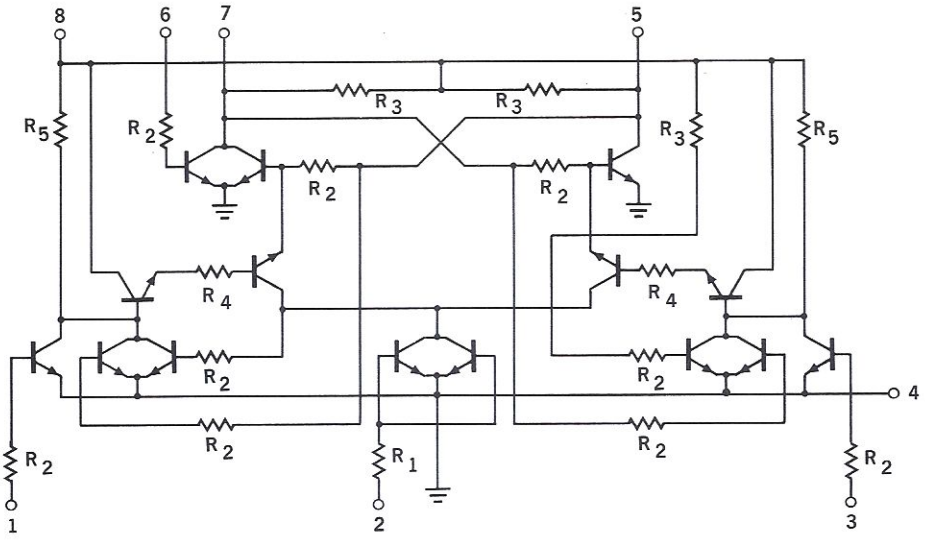
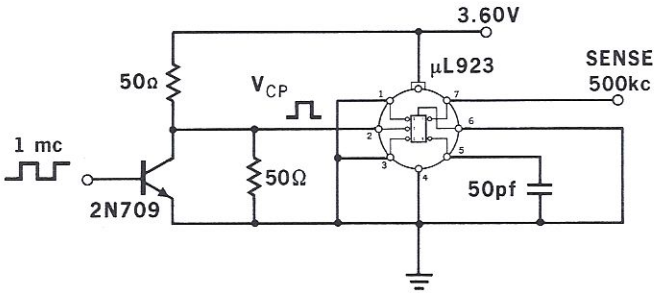
SCHEMATIC DIAGRAM

TYPICAL RESISTOR VALUES

R_1 = 260Ω
R_2 = 450Ω
R_3 = 640Ω
R_4 = 300Ω
R_5 = 700Ω

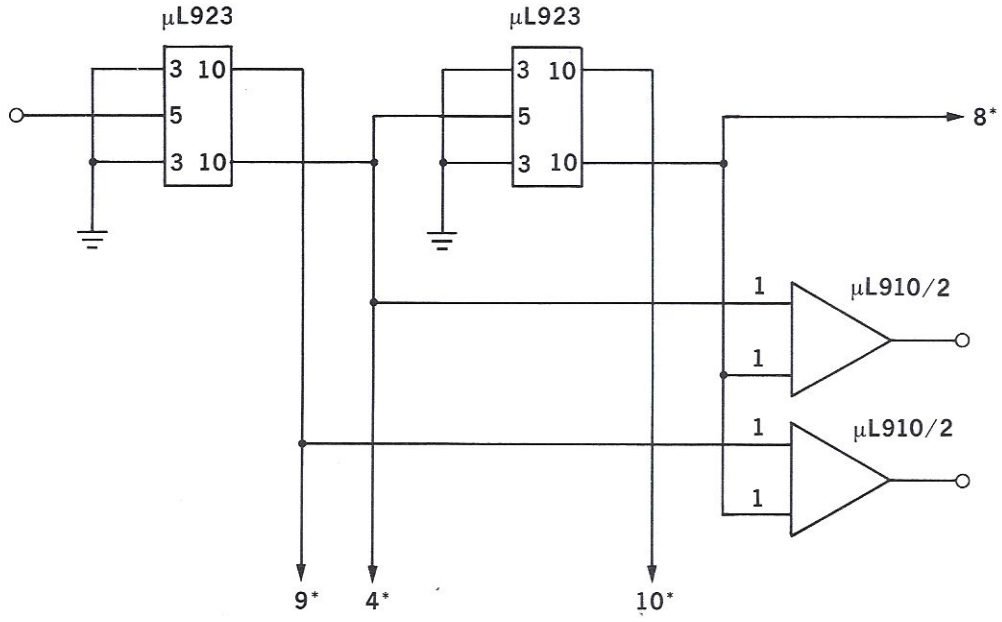


TOGGLING MODE TEST CIRCUIT



CLOCK FREQUENCY UP TO 2MC
CLOCK PULSE DUTY CYCLE 35% - 65%
CAPACITIVE LOAD PER OUTPUT 50pf

EXAMPLE USING LOW POWER µL 910's TO DECODE THE µL 923 OPERATED AS A COUNTER.



* LOAD FACTOR AVAILABLE FOR ADDITIONAL LOGIC

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